November 2008

ANAEROBIC DIGESTER

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Code 366

ANAEROBIC DIGESTER

An anaerobic digester is a system to biologically treat waste in the absence of oxygen.

PRACTICE INFORMATION

An anaerobic digester biologically treats waste as a component of an agricultural waste management system. Digesters can operate under ambient temperature conditions or at controlled temperatures. Digesters can be used to:

- Produce biogas for energy production
- Manage odors
- Reduce greenhouse gas emissions
- Reduce pathogens

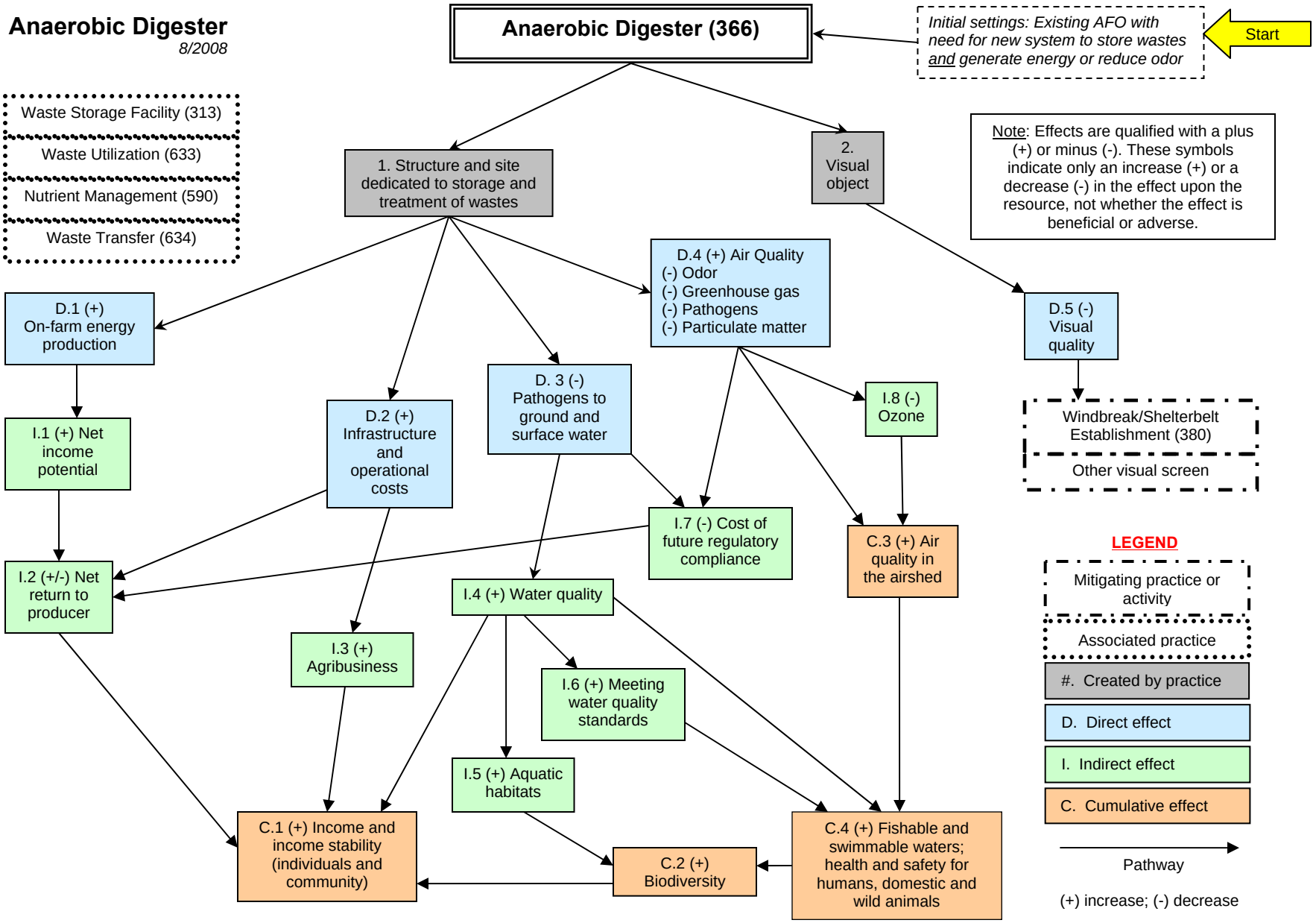
Design criteria for this practice include site location, digester volume and retention time, flow rates, methane yield, 12-month energy budget, and process control and monitoring. An operation and maintenance plan is developed specifically for each system.

COMMON ASSOCIATED PRACTICES

Anaerobic Digester is commonly applied as part of a Conservation Management System with Waste Storage Facility (313), Waste Utilization (633), Waste Transfer (634), Critical Area Planting (342), Nutrient Management (590), and other practices.

For further information, refer to the practice standard in the local Field Office Technical Guide and associated practice specifications.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.



The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.